

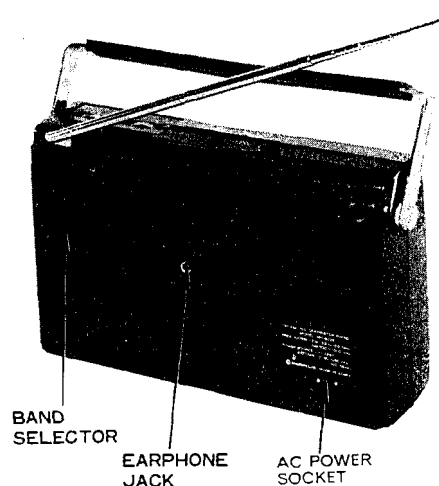
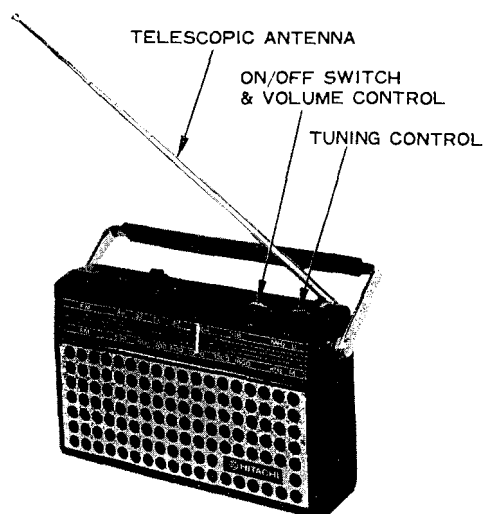


# HITACHI

# KH-832E

## SERVICE MANUAL

NO. 7 7 1 77



### SPECIFICATIONS

CIRCUIT SYSTEM .....FM/AM superheterodyne

TUNING RANGE .....FM: 88~108MHz  
AM: 530~1605kHz

INTERMEDIATE FREQUENCY.....FM: 10.7MHz  
AM: 465kHz

TRANSISTOR..... 9

DIODE .....11

VARISTOR ..... 1

THERMISTOR..... 1

POWER SUPPLY .....AC: 220-240V, 50Hz  
DC: 6V (IEC R6×4)

CURRENT CONSUMPTION .....15mA (with no signal)

SPEAKER.....2 $\frac{5}{8}$ " (6.6cm) P.M., 8Ω

AUDIO OUTPUT .....350mW (Max.)  
200mW (THD 10%)

SENSITIVITY.....FM: 10 dB (Max.), 15 dB (practical)  
AM: 35 dB (Max.), 48 dB (practical)

ANTENNA .....FM: Telescopic antenna  
AM: Built-in ferrite-core antenna

DIMENSIONS .....4 $\frac{1}{4}$ " (H) × 7 $\frac{1}{8}$ " (W) × 1 $\frac{5}{16}$ " (D)

WEIGHT .....1 lbs 6 oz

ACCESSORIES .....Earphone.....1  
Power cord.....1

### PORTABLE RADIO

July 1 9 7 5

77

## BLOCK DIAGRAM

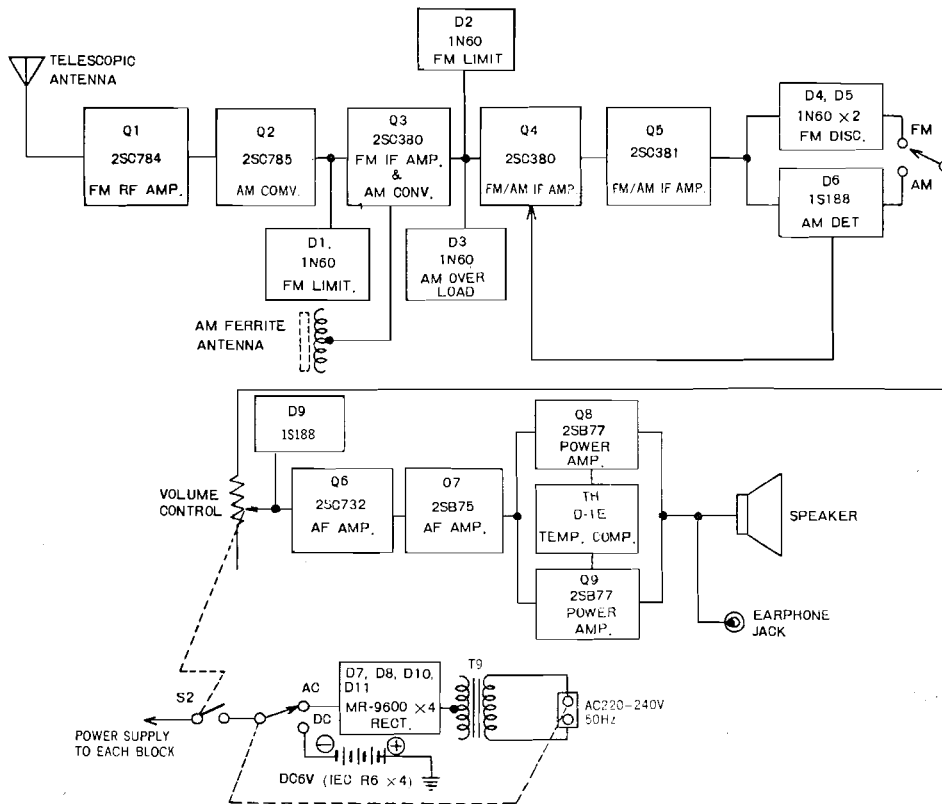


Fig. 1

## DISASSEMBLY

### 1. Removal of rear case

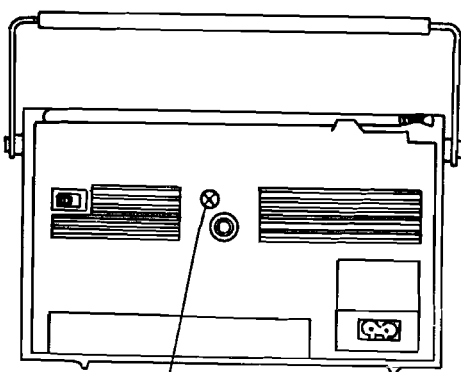


Fig. 2

### 2. Removal of circuit board

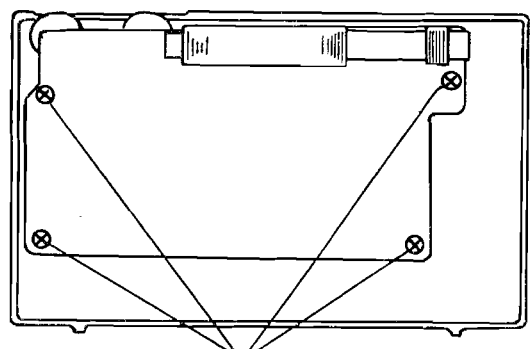
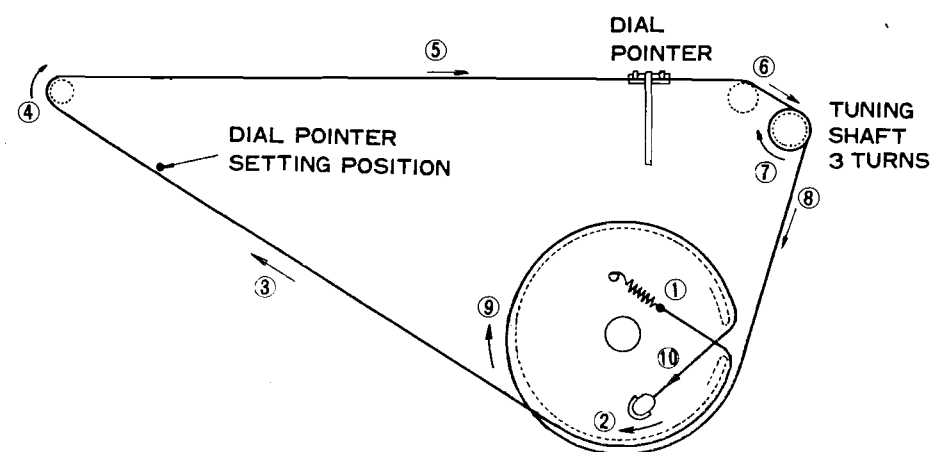


Fig. 3

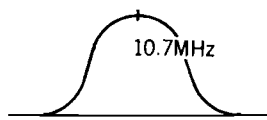
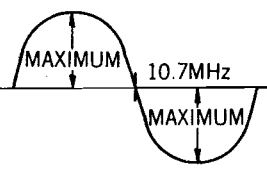
## DIAL CORD STRINGING



VARIABLE CAPACITOR: FULLY COUNTERCLOCKWISE.

Fig. 4

## CIRCUIT ADJUSTMENT

Step	Adjustment circuit	Connection	Signal or Sweep generator	Pointer position	Adjustment parts	How to adjust
FM CIRCUIT						
①	FM-IF	Sweep Generator...Connect output terminal to TP1.	10.7±1MHz	High freq. end	T5, T4, T3, T2, T1	① Turn core (T5) fully clockwise. ② Adjust core (T4, T3, T2, T1) to be this waveform. 
②	FM-DISCR1	Oscilloscope .....Connect vertical terminal to TP2.			T5	Adjust core (T5) for maximum output. 
③	FM-RF	Signal Generator...Connect to telescopic antenna through a dummy antenna shown in Fig. 5.	87MHz (For Germany: 87.5MHz)	Low freq. end	L4	Adjust core for maximum output.
			109MHz (For Germany: 108MHz)	High freq. end	CT2	
		Vacuum Tube Voltmeter ..... Connect AC probe to TP2.	90MHz	90MHz	L2	Adjust core for maximum output.
			106MHz	106MHz	CT1	

Step	Adjustment circuit		Connection	Signal or sweep generator	Pointer position	Adjustment parts	How to adjust
AM CIRCUIT							
①	AM-IF		Signal Generator...Connect output terminal to loop antenna.  Vacuum Tube Voltmeter.. Connect AC probe to TP3.	High freq. end	465kHz	T8, T7, T6	Adjust core for maximum output.
②	AM-RF	Covering		Low freq. end	515kHz	L6	
		Tracking		High freq. end	1,650kHz	CT3	
				600kHz	600kHz	L5	
				1,400kHz	1,400kHz	CT4	

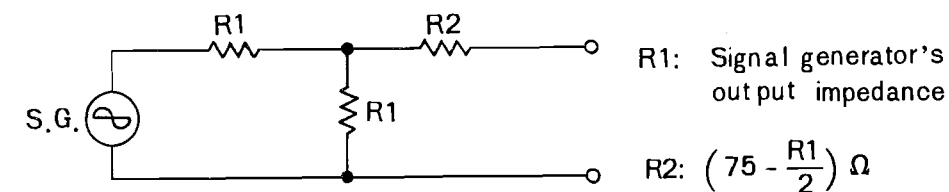


Fig. 5

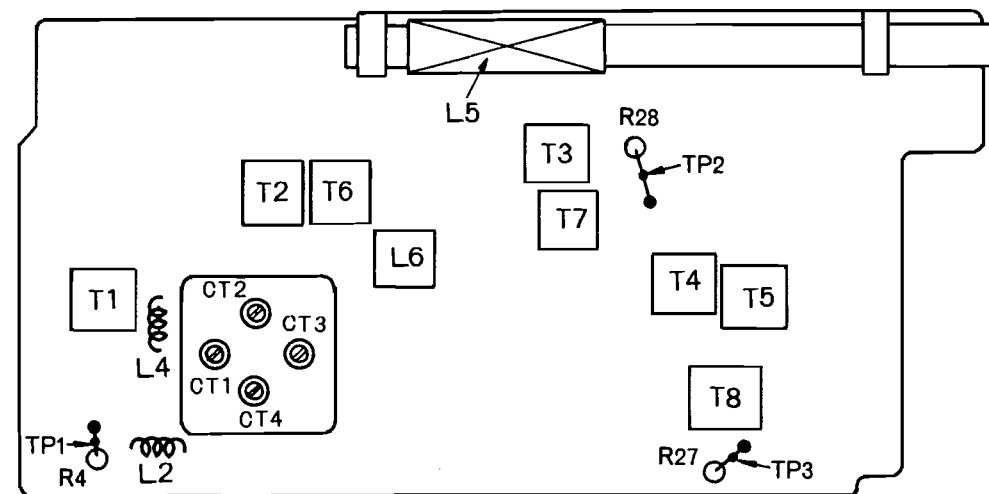
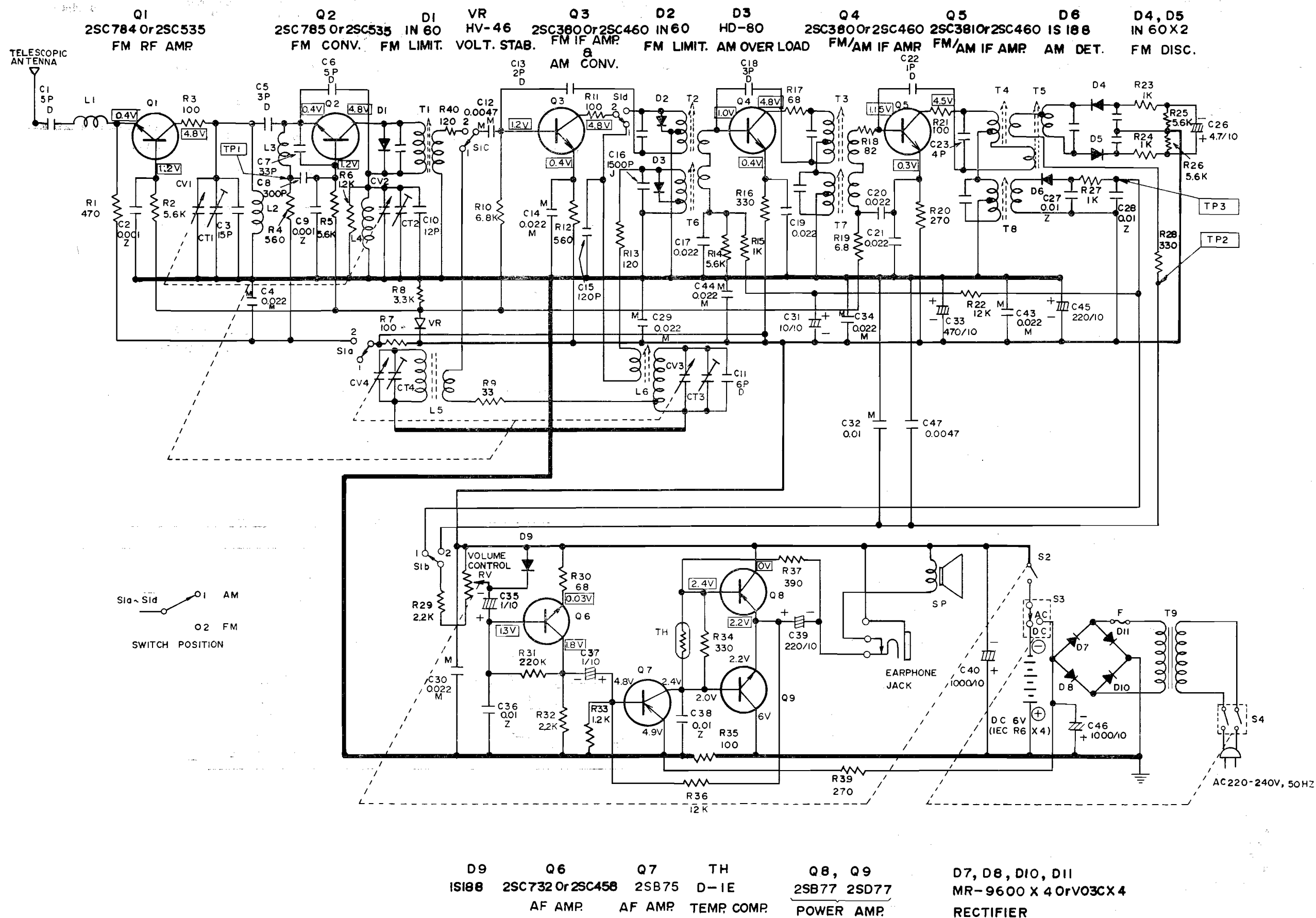


Fig. 6

# SCHEMATIC DIAGRAM







## NOTE

1. Voltage measured at base of chassis with minimum volume control and no signal.
2. Nomenclature of Resistors and Capacitors.

## RESISTORS

Value	No indicated : $\Omega$ K : 1000 $\Omega$
Wattage	No indicated : $\frac{1}{4}$ W.
Tolerance	No indicated : $\pm 5\%$ K : $\pm 10\%$
Sort	No indicated : Carbon film RC : Composition RS : Metal oxide
Example R101.....Circuit No. 150.....Value RS · I · K.....Sort · Wattage · Tolerance	

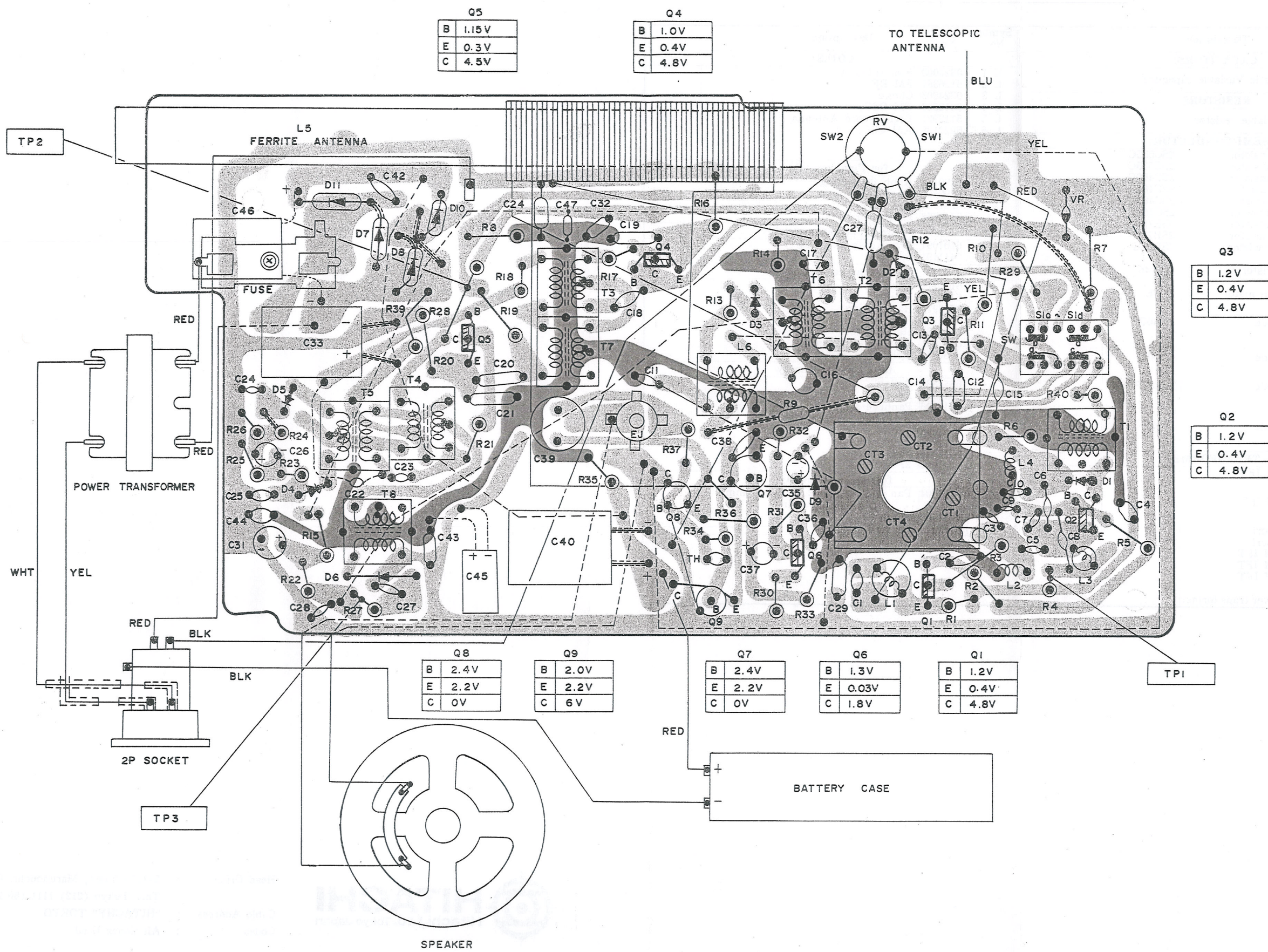
## CAPACITORS

Value	No indicated : $\mu$ F P : pF	
Voltage	No indicated : 50WV	
Tolerance	No indicated : $\pm 10\%$ J : $\pm 5\%$ M : $\pm 20\%$ Z : $+80, -20\%$ D : $\pm 0.5$ pF C : $\pm 0.25$ pF	
Sort		Ceramic
		Electrolytic
		Mylar
Example		
	C101 ..... Circuit No.	
	10/25 ..... Value/ voltage	
	↑ ..... Sort	

3. Be sure to make your orders of resistors and capacitors with value, Voltage, tolerance and sort.
4. When replacing capacitors marked with \*, Use specified ones stated on parts list since required temperature characteristics.



# CIRCUIT BOARD DIAGRAM





## REPLACEMENT PARTS

Symbol No.	Stock No.	Description			Symbol No.	Stock No.	Description		
CAPACITORS:					COILS:				
C V 1~4 C T 1~4	5052081	Plastic Variable capacitor			L 1	0324003	FM Antenna		
RESISTORS:					L 2	5126381	FM RF		
R V	0151430	Variable resistor			L 3	0324003	Choke		
SEMI-CONDUCTOR:					L 4	0318526	FM OSC.		
Q 1	0573511	Transistor	2SC535C		L 5	5112921	Ferrite-core Antenna		
Q 2	0573511	Transistor	2SC535C		L 6	5220198	AM OSC.		
Q 3	0573487	Transistor	2SC460C		for Final assembly				
Q 4	0573487	Transistor	2SC460C		6290181	Knob for tuning			
Q 5	0573487	Transistor	2SC460C		6290171	Knob for volume			
Q 6	5320064	Transistor	2SC458D		5731001	Earphone			
Q 7	0573117	Transistor	2SB75C		5743898	Power cord			
Q 8	5320295	Transistor	2SB77C		for Front case assembly				
Q 9	5320305	Transistor	2SD77C		6101091	Front case assembly			
V R	5340022	Varistor	HV-46		5411191	Speaker			
T H	0576056	Thermistor	D-1E		for Rear case assembly				
D 1}	0575019	Diode	1N60P		6101111	Rear case assembly			
D 2}				6331091	Handle				
D 3}				6726971	Handle ring				
D 4}	0575019	Diode	1N60P		6325361	Handle spring			
D 5}				7534381	Handle shaft				
D 6}	5330331	Diode	1S188FM-1		6172021	Battery lid assembly			
D 9}				5750251	Telescopic antenna				
D 7}	5330001	Diode	VO3C		for Chassis assembly				
D 8}				6342831	Pulley				
D 10}				6342881	Pulley				
D 11}				0711306	Panhead screw 2.6mm $\phi$ $\times$ 6mm for pulley mounting				
				6316232	Spring				
					6394111	Pointer			
					6171111	Battery case			
					5651043	2P socket			
TRANSFORMER:					for P.C.B assembly				
T 1	0329603	FM IFT			0721304	Pan head screw 2.6mm $\phi$ $\times$ 4mm for V.C mounting			
T 2}	0329602	FM IFT			0532163	Slide switch			
T 3}			0543217	Earphone jack					
T 4	0326026	Discri							
T 5	0326028	Discri							
T 6	0329501	AM IFT							
T 7	0322115	AM IFT							
T 8	0322118	AM IFT							
T 9	5211821	Power trans former							



Head Office : 5-1,1-chome, Marunouchi, Chiyodaku, Tokyo  
Tel. Tokyo (212) 1111 (80 lines)  
Cable Address : "HITACHY" TOKYO  
Codes : All Codes Used

Printed in Japan  
'75 (K)